CLAIMS

1. A method for laying an underwater pipeline comprising the steps of :

constructing lengths of pipeline by endwise connection of a plurality of pipe segments;

securing bend restriction means to said lengths of pipeline, the bend restriction means being arranged to prevent the lengths of pipeline from bending by more than a predetermined maximum amount;

securing flotation means to the lengths of pipeline such that the lengths of pipeline are held adjacent the surface of the ocean;

towing the lengths of pipeline to the desired location; and

connecting each length of pipeline to an adjacent length of pipeline and altering the buoyancy of the flotation means or releasing the flotation means from each length of pipeline so that the length of pipeline sinks to the ocean floor.

2. A method for laying an underwater pipeline in accordance with claim 1, wherein the bend restriction means comprises a plurality of bend restrictor segments, each bend restrictor segment being connected to adjacent bend restrictor segments by a flexible elongate member, the method including the steps of securing each bend restrictor segment to the length of pipeline, along the length pipeline.

3. A method for laying an underwater pipeline in accordance with claim 2, wherein the flotation means comprises a plurality of flotation modules connected in series, the method including the steps of securing each of the flotation modules to a respective bend restrictor segment.

4. A method for laying an underwater pipeline in accordance with any one of claims 1 to 3, including the step of removing the bend restriction means from each of the

lengths of pipeline with the exception of a portion of the bend restriction means adjacent an end of the length of pipeline after each length of pipeline has descended to the ocean floor.

5. A method for laying an underwater pipeline in accordance with Claim 4, including the step of raising the ends of adjacent lengths of pipeline to the ocean surface, connecting said adjacent ends together and lowering the connected adjacent ends to the ocean floor.

6. A method of laying an underwater pipeline in accordance with Claim 5, including the step of removing the portions of the bend restriction means from the ends of the lengths of pipeline once the adjacent lengths of pipeline have been connected and lowered to the ocean floor.

7. A method for laying an underwater pipeline in accordance with any one of claims 1 to 6, wherein altering the buoyancy of the flotation means comprises at least partially filling the flotation means with sea water.

8. A method for laying an underwater pipeline in accordance with any one of claims 1 to 7 including the step of placing a plurality of floating markers secured to locations on the ocean floor along the proposed route of the underwater pipeline.

9. Apparatus for laying an underwater pipeline comprising:

bend restriction means arranged to be secured to lengths of pipeline formed by endwise connection of a plurality of pipe segments, the bend restriction means being arranged to prevent the lengths of pipeline from bending by more than a predetermined maximum amount; and

flotation means arranged to be secured to the lengths of pipeline such that the lengths of pipeline are held adjacent the surface of the ocean;

wherein the flotation means are releasable from the length of pipeline or may have their buoyancy altered such that the lengths of pipeline may be towed to a desired location and sunk to the ocean floor by release of the flotation means or altering the buoyancy of the flotation means.

10. Apparatus for laying an underwater pipeline in accordance with claim 9, wherein the bend restriction means comprises a plurality of bend restrictor segments connected in series, each bend restrictor segment being connected to adjacent bend restrictor segments by a flexible elongate member, the length of the flexible elongate member and the dimensions of the bend restrictor segments being arranged such that the bend restriction means will bend to no more than a predetermined minimum bend radius.

11. Apparatus for laying an underwater pipeline in accordance with claim 10, wherein the flotation means comprises a plurality of flotation modules connected in series, each flotation module being connected to a respective bend restrictor segment.

12. Apparatus for laying an underwater pipeline in accordance with claim 10 or 11 wherein each of the bend restrictor segments comprises a solid cylindrical element having longitudinally opposed hemispherical ends, the flexible elongate members being connected between adjacent cylindrical elements at points located centrally on adjacent hemispherical ends.

13. Apparatus for laying an underwater pipeline in accordance with claim 10 or 11, wherein each of the bend restrictor segments comprises a frame having one of the flotation modules mounted within.

14. Apparatus for laying an underwater pipeline in accordance with claim 13, wherein the frame is constructed as a cylinder or prism and the flotation module is located along a central longitudinal axis of the frame.

15. Apparatus for laying an underwater pipeline in accordance with claim 14, wherein the flexible elongate members are connected between adjacent ends of the flotation modules of adjacent bend restrictor segments.

16. Apparatus for laying an underwater pipeline substantially as hereinbefore described with reference to the accompanying drawings.

17. A method of laying an underwater pipeline substantially as hereinbefore described with reference to the accompanying drawings.